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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/710,623	07/26/2004	Kuo-Chao Lin	12574-US-PA	4622

31561 7590 05/07/2007

JIANQ CHYUN INTELLECTUAL PROPERTY OFFICE
7 FLOOR-1, NO. 100
ROOSEVELT ROAD, SECTION 2
TAIPEI, 100
TAIWAN

EXAMINER	
PHAN, DEAN	

ART UNIT	PAPER NUMBER
2182	

NOTIFICATION DATE	DELIVERY MODE
05/07/2007	ELECTRONIC

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Notice of the Office communication was sent electronically on above-indicated "Notification Date" to the following e-mail address(es):

Office Action Summary	Application No.	Applicant(s)	
	10/710,623	LIN, KUO-CHAO	
	Examiner	Art Unit	
	Dean Phan	2182	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *26 July 2004*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☐ Claim(s) *1-14* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-14* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *26 July 2004* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

Claims 1-14 are rejected under 35 U.S.C. 103(a) as being unpatentable over Chen et al (U.S Pub# 2005/0160223), in the view of Futral et al (U.S Pat# 7,120,708).

As to claim 1, Chen et al teach a direct memory access method for a card reader (abstract; *card reader/flash card exchanger),* said card reader (Fig 2 card exchanger 38) including a direct memory access controller (Fig 2 microcontroller 30, par. 57) and being coupled to a system (host PC 10), said system including a main memory and a control software (PC *has a memory and OS software in order to operate),* said system executing a driver program (Fig 6, abstract, par. 11) to control said card reader. Chen et al also teach sending out an interrupting signal to said system (par. 36). Chen et al do not teach the method comprising from step a to step g. However, in the same field of art, Futral et al teach a direct memory access system (abstract) comprising:

a. allocating an area of said main memory (Fig. 1, col 3 lns 56-62);

b. establishing a reading table (col 4 lns 11-19; *Status storage location functions as a reading table)* via said control software (col 5 lns 50-52);

c. setting a parameter set group based on said reading table (col 3 lns 54-66) and moving said parameter set group to said area of said main memory (Fig. 10 step 1010, col 12 lns 5-10);

d. acquiring an initial address of said parameter set group (step 1020);

e. reading a parameter value from said initial address (col 12 lns 10-13);

f. using a direct memory access method to move data based on said parameter value (step 1030);

g. repeating said steps e and f before reading all said parameter values (step 1050);

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Chen and Futral et al. in order to reduce the time of data transfer. (see col 1 lns 53-61).

As to claim 2, Chen and Futral et al teach the method of claim 1 with further: said reading table is established based on a block status recording area (Futral, col 3 lns 34-48) of a memory card (Chen, Fig. 2 memory card 22, 26, 32, 36).

As to claim 3, all same limitations are listed in claim 1 with further: said parameter set group is moved by said driver program (Futral, col 3 lns 56-61).

As to claim 4, all limitations are listed in claim 1 with further: said parameter set group at least includes a parameter set (Futral, col 3 lns 66-col 4 lns 5).

As to claim 5, all same limitations are listed in claim 1 with further: said initial address of said parameter set group is provided by said driver program to said direct memory access controller (Futral, col 1 lns 25-30).

As to claim 6, all same limitations are listed in claim 1 with further: each parameter set of said parameter set group includes an origin address of said data (Futral, Fig 3 *src data storloc base addr)* and a target address of said data (Futral, *dest data stor loc base addr).*

As to claim 7, all limitations are listed in claim 1 with further: said parameter set group at least includes a plurality of parameter sets (Futral, Fig *6 parameter storage location 643a-c)* and each of said plurality of parameter sets assigns a direct memory access range (Futral, Fig *6 quantity of data).*

As to claim 8, all limitations are listed in claim 7 with further: at least one of said plurality of parameter sets includes a parameter indicating an initial address of a following parameter set (Futral, Fig. *6 next param stor loc base addr).*

As to claim 9, Chen et al teach a method for programming a direct memory access controller (Fig 6) for a card reader (Fig 2 card exchanger 38), said card reader including the direct memory access controller (Fig 2 microcontroller 30, par. 57) and being coupled to a system (host PC 10), said system including a main memory and a control software *(PC has a memory and OS software in order to operate),* said system executing said driver program to control said card reader (Fig 6, abstract, par 11). Chen et al do not teach said control software establishing a reading table, said driver program setting a parameter set group based on said reading table and moving said parameter set group to an area of said main memory, and from step a to step d. However, in the same field of art, Futral et al teach a method for programming a direct memory controller wherein the program establishing a reading table (col 4 lns 11-19, col 5 lns 50-52; *Status storage location*

functions as a reading table), said driver program setting a parameter set group based on said reading table (col 3 lns 54-66) and moving said parameter set group to said area of said main memory (Fig. 10 step 1010, col 12 lns 5-10). The said method comprising:

a. said driver program (col 3 lns 56-65, col 12 lns 10-13; *The instructions is executed by CPU)* providing an initial address of said parameter set group to said direct memory access controller (Fig. 10 step 1020);

b. according to said initial address *(base address),* said direct memory access controller reading a parameter value (Fig. 6, col 9 lns 37-51), which has not been read *(The DMA controller obtains the base address of next parameter from the previous one),* from said parameter set group (Fig 6 parameter storage location 643a-c) in a predetermined sequence *(parameters link to each other);*

c. said direct memory access controller using a direct memory access method to move data based on said parameter value (Fig 6, Fig 10 step 1030; *Using the value in the parameters to move data);* and

d. repeating said steps b and c before reading all said parameter values (step 1050).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to combine the teachings of Chen and Futral et al. in order to reduce the time of data transfer. *(see* col 1 lns 53-61).

As to claims 10-14, all same limitations are listed in claim 9 with further limitations in claims 2, 4, 6-8.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Dean Phan whose telephone number is (571) 270-1002. The examiner can normally be reached on Mon - Thu; 9:30AM - 5:00PM EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Kim Huynh can be reached on (571) 272-4147. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

dp

KIM HUYNH
SUPERVISORY PATENT EXAMINER
4/30/07